

Still another objective of the invention is to provide molded articles, films, fibers, fibers for industrial materials, modified fibers and flame retardant fibers.

SUMMARY OF THE INVENTION

Now we discovered surprisingly that a coexistence of a first component and a second component, both of which have no sufficient polycondensation catalyst activities in themselves, resulted in a practically sufficient, increased activity as a polycondensation catalyst, thus establishing the invention.

Accordingly, the present invention is a polyester polymerization catalyst containing no antimony or germanium whose activity parameter (AP) fulfills Formula [1] shown below and the thermal stability degree (TD) of a polyethylene terephthalate polymerized using which fulfills Formula [2] shown below without removing or inactivating said catalyst:

$$[1] \text{ AP (min)} < 2T(\text{min})$$

wherein AP is a time (min) required for a polymerization using the catalyst at 275°C under reduced pressure of 0.1 Torr to obtain a polyethylene terephthalate whose intrinsic viscosity is 0.5 dl/g. T is an AP observed when using antimony trioxide as a catalyst. The added amount of antimony trioxide is 0.05 mol% as antimony atom based on an acid component in a resultant polyethylene terephthalate; and,

$$[2] \text{ TD (\%)} < 25$$